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**ENERGY AND ENVIRONMENT CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION**

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300 SOWER BOULEVARD
FRANKFORT, KENTUCKY 40601

February 23, 2018

Colonel Norbert A. Fochs, Commander
Blue Grass Army Depot
431 Battlefield Memorial Highway
Richmond, Kentucky 40475-5060

RE: Permit Modification Approval for GB Sample Extraction Operation
Blue Grass Army Depot (BGAD), Richmond, Madison County, Kentucky
EPA ID# KY8-213-820-105, AI# 2805, Graybar# APE20170004

Dear Colonel Fochs,

The Kentucky Division of Waste Management has approved the above-referenced application to modify the BGAD Hazardous Waste Management Permit.

Enclosed are the following documents:

- The final signed permit modification issuance page
- The final GB Sample Extraction Operation Section of the permit
- The final revised Entire Facility Section of the final permit. Conditions F.I.A, F.I.B, and F.I.E were revised to reference the new GB Sample Extraction Operation Section of the permit. These revisions were made as administrative changes necessary to incorporate the new permit section.
- The responses to comments received regarding the draft permit

If you have any questions regarding this correspondence, please contact April Webb at (502) 782-6470 or by email at april.webb@ky.gov.

Sincerely,

April J. Webb, P.E.
Manager, Hazardous Waste Branch

EC: Jim Hawkins, BGAD
Randy Nida, BGCA
Terri Crosby-Vega, US EPA

Todd Williams, ACWA
Jeff Krejsa, ACWA
Brian Osterman, KDEP

Kentucky Energy and Environment Cabinet
Department for Environmental Protection
Division of Waste Management

HAZARDOUS WASTE MANAGEMENT FACILITY PERMIT

Modification

Blue Grass Army Depot
431 Battlefield Memorial Highway
Richmond, Kentucky 40475-5060
EPA ID: KY8-213-820-105, AI: 2805

The Division of Waste Management hereby grants the above-named facility a permit to engage in activity specified below. This permit has been issued under the provision of KRS Chapter 224 and regulations promulgated pursuant thereto and is subject to all conditions and operating limitations contained herein. Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by this Cabinet and/or other federal, state, and local agencies.

Part I	-Legal Authority
Part II	-Standard Conditions
Part III	-Specific Conditions
	-Land Disposal Restrictions
	-RCRA Air Emission Standards
Part IV	-Corrective Action
Part V	-Referenced Attachments
Part VI	-Waste Minimization

No deviation from the plans and specifications submitted with your application or the conditions specified herein is allowed, unless authorized in writing from the Division of Waste Management. Violation of the terms and conditions specified herein shall render this permit null and void. All rights of inspection by representatives of the Division of Waste Management are reserved. Conformance with all applicable Waste Management Regulations is the responsibility of the permittee. Receipt of the permit fee and financial assurance specified below is hereby acknowledged.

PERMIT TYPE:	Operating	PERMIT NUMBER:	KY8-213-820-105
TYPE OF ACTIVITY:	Treatment	COUNTY:	Madison
PERMIT FEE:	NA	MODIFICATION EFFECTIVE DATE:	
CLOSURE AMOUNT:	NA		<u>March 26, 2018</u>
POST-CLOSURE AMOUNT:	NA	PERMIT EXPIRATION DATE:	
CLOSURE INSTRUMENT:	Federal Facility		<u>April 18, 2026</u>
POST-CLOSURE INSTRUMENT:	Federal Facility		
SUDDEN LIABILITY INSURANCE:	NA		
HAZARDOUS WASTE MANAGEMENT UNITS:	GB Sample Extraction Operation		
NON-SUDDEN LIABILITY INSURANCE:	NA		

Issued this 23rd day of February, 2018



Director
Division of Waste Management

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PART I LEGAL AUTHORITY

See this Part in the Entire Facility Section

PART II STANDARD CONDITIONS

See this Part in the Entire Facility Section

PART III SPECIFIC CONDITIONS

G.III.A. GENERAL STANDARDS

G.III.A.(1) Permitted Waste Streams, Descriptions, and Codes

This permit section specifies the requirements for the transportation and sampling of GB filled projectiles to obtain approximately one liter each of GB agent that contains the stabilizer tributylamine (TBA) or the stabilizer diisopropylcarbodiimide (DICDI). Eight-inch sarin (GB) filled projectiles from the BGAD stockpile shall be the only wastes transported to and sampled in the GB Sampling Facility.

The hazardous wastes generated at the GB Sampling Facility are listed below. Each of these hazardous wastes shall be managed as specified within this Permit. "GB Sampling Facility" includes the Environmental Enclosure (EE), Personnel Decontamination Station (PDS), Chemical Agent Filtration System (CAFS), the on-site laboratory, and any contiguous land, structure, or facility within the boundary shown in Figure D-2 of the GB Sample Extraction Operation Permit Modification Request (Permit Application).

Waste Stream	Waste Codes	Waste Description
G1	N001	Agent contaminated debris
G2	D001, D002, D003, D004, D011, D018, D022, D035, D036, D037, D039, D040, D043, U002, U044, U103, U127, U154, U131, U210, F001, F002, F003, F004, and/or N701	Laboratory wastes
G3	D002 and/or N001	Spent decontamination waste
G4	D007 and/or N001	Agent contaminated carbon filters

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Any wastes that are generated at the GB Sampling Facility and that may have come into contact with GB agent shall be managed as hazardous waste. All carbon and HEPA filters that are used during GB Sampling operations shall be managed as hazardous waste.

[401 KAR 39:060 Section 3, KRS 224.50-130, KRS 224.46-530]

G.III.A.(2) Hazardous Waste Treatment Units

- The GB Sampling Facility is considered a hazardous waste treatment unit.
- Movement and handling of GB filled projectiles, overpacks, and Department of Transportation (DOT) bottles are regulated as treatment under Commonwealth of Kentucky statutes and regulations.

[KRS 224.46-530, KRS 224.50-130(5)]

G.III.A.(3) Listed N-Codes

The following compounds are listed hazardous wastes:

- N001 GB (isopropyl methyl phosphonofluoridate) and related compounds (H)*
- N701 Lab Wastes associated with treated GB wastes

* "(H)" designates acute hazardous waste.

[401 KAR 39:060 Section 3, KRS 224.50-130(2)]

G.III.A.(4) Permitted Container Storage Areas

There shall be no permitted container storage areas at the GB Sampling Facility. The Permittee shall comply with requirements in Condition G.III.I. for containers at the GB Sampling Facility.

[401 KAR 39:080 Section 1, 40 CFR 262.30-33, 40 CFR 262.34(a)-(i), 401 KAR 39:090 Section 1, 40 CFR 264.30-35, 40 CFR 264.170-179, KRS 224.46-530]

G.III.A.(5) Certification Prior to Start of GB Sampling Operations

The Permittee shall not commence sampling operations at the GB Sampling Facility until the Permittee has submitted to the Division a letter that certifies that the EE and the CAFS have been constructed in compliance with the Permit Application design and this Permit, and the Division has approved in writing the commencement of GB Sampling Operations.

[401 KAR 39:060 Section 5, KRS 224.46-530(1)(g)]

G.III.B. GENERAL FACILITY STANDARDS

G.III.B.(1) Identification Number

KY8-213-820-105

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G.III.B.(2) Required Notices

See Entire Facility Section

G.III.B.(3) Waste Analysis

See Entire Facility Section

G.III.B.(4) Security

See Entire Facility Section

G.III.B.(5) General Inspection Requirements

See Entire Facility Section

G.III.B.(6) Personnel Training

See Entire Facility Section

G.III.B.(7) General Requirements for Ignitable, Reactive, or Incompatible Wastes

See Entire Facility Section

G.III.B.(8) Location Standards

See Entire Facility Section

G.III.B.(9) Land Disposal Restrictions (LDR)

See Entire Facility Section

G.III.B.(10) Compliance Schedule

Not Applicable

G.III.B.(11) Facility Construction Certification

Not Applicable

G.III.C. PREPAREDNESS AND PREVENTION

G.III.C.(1) Design and Operation of Facility

The Permittee shall construct, maintain, and operate the facility in a manner to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste constituents

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to air, soil, or surface water which could threaten human health or the environment.

[401 KAR 39:090 Section 1, 40 CFR 264.31]

G.III.C.(2) Required Equipment

During GB Sampling operations, the Permittee shall keep all of the following at the GB Sampling Facility:

- An internal communications or alarm system capable of providing immediate emergency instruction (voice or signal) to facility personnel
- A device, such as a telephone (immediately available at the scene of operations) or a hand-held two (2) way radio, capable of summoning emergency assistance from BGAD security force, BGAD fire department, emergency operations center (EOC), or state/local emergency response teams
- Fire control equipment (including portable fire extinguishers and special extinguishing equipment, such as that using foam, inert gas, or dry chemicals)
- Spill control equipment and material
- Agent monitoring equipment, personal protective equipment, decontamination equipment and solution

[401 KAR 39:090 Section 1, 40 CFR 264.32, KRS 224.46-530(1)(g)]

G.III.C.(3) Testing and Maintenance of Equipment

To ensure proper operation of emergency equipment, the Permittee shall:

- Test all emergency equipment at the facility, including communication, alarm, fire, spill control, and decontamination equipment
- Maintain all equipment at the facility in good working order, consistent with the inspection schedule in the Procedures to Prevent Hazards, Attachment F

[401 KAR 39:090 Section 1, 40 CFR 264.33]

G.III.C.(4) Access to Communications or Alarm Systems

Whenever hazardous waste is present in the GB Sampling Facility, all personnel shall have immediate access, either directly or through visual or voice contact with another employee, to a telephone or a hand-held two (2) way radio that is capable of summoning emergency assistance.

[401 KAR 39:090 Section 1, 40 CFR 264.34]

G.III.C.(5) Required Aisle Space

Not Applicable

G.III.C.(6) Arrangements with Local Authorities

See Entire Facility Section

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G.III.D. CONTINGENCY PLAN AND EMERGENCY PROCEDURES

G.III.D.(1) Implementation of Plan

The Permittee shall immediately carry out the procedures in Contingency Plan, Attachment G, whenever there is an imminent or actual emergency situation, including a fire, explosion, or unplanned sudden or non-sudden release of any hazardous waste or hazardous waste constituents which could threaten human health or the environment. The Permittee shall activate internal facility alarms or communication systems, where applicable, to notify all facility personnel and appropriate state or local agencies with designated response roles if the help of such agencies is needed

[401 KAR 39:090 Section 1, 40 CFR 264.51, 40 CFR 264.56(a)]

G.III.D.(2) Content of Plan

The Contingency Plan shall contain the following information and be kept up to date:

- Actions that facility personnel shall take in response to fires, explosions, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water at the facility
- Arrangements agreed to by local emergency services
- All persons qualified to act as Emergency Coordinator. Where more than one person is listed, one must be named as primary emergency coordinator and others must be listed in the order in which they will assume responsibility as alternates.
- At least 30 days prior to the start of sampling operations, the Permittee shall submit to the Division a list of persons qualified to act as Emergency Coordinator, including the name or title of the primary emergency coordinator, pursuant to 401 KAR 39:090 Section 1.
- A list of all emergency equipment, including the location and a physical description of each item on the list and a brief outline of its capabilities
- Evacuation plan for facility personnel that describes signals, routes, and alternate routes

[401 KAR 39:090 Section 1, 40 CFR 264.52]

G.III.D.(3) Copies of Plan

A copy of the Contingency Plan, Attachment G, and all revisions to the plan shall be:

- Maintained at the GB Sampling Command Post and the BGCAPP Main Plant Control Room
- Provided to BGAD Emergency Operations Center (EOC), all local police departments, fire departments, hospitals, and state and local emergency response teams that may be called upon to provide emergency services
- Provided to all outside agencies, contractors, and emergency response providers that have a Memorandum of Agreement (MOA) with BGAD to provide assistance in an emergency
- Provided to the Hazardous Waste Branch Manager

[401 KAR 39:090 Section 1, 40 CFR 264.53]

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G.III.D.(4) Amendment of Plan

The Contingency Plan, Attachment G, shall be reviewed, and immediately amended, if necessary, whenever:

- The facility permit is revised
- The plan fails in an emergency
- The facility changes (e.g., in its design, construction, operation, maintenance, or other circumstances) in a way that materially increases the potential for fires, explosions, or releases of hazardous waste or hazardous waste constituents, or changes the response necessary in an emergency
- There is a change to the list of Emergency Coordinators
- The list of emergency equipment changes

Administrative updates and/or changes as identified above to the Contingency Plan may or may not warrant a permit modification. These shall be submitted to the Hazardous Waste Branch Manager for determination.

[401 KAR 39:090 Section 1, 40 CFR 264.54]

G.III.D.(5) Emergency Coordinator

At all times, there must be at least one employee either on the facility premises or on call (i.e., available to respond to an emergency by reaching the facility within a short period of time) with the responsibility for coordinating all emergency response measures. This emergency coordinator must be thoroughly familiar with all aspects of the facility's contingency plan, all operations and activities at the facility, the location and characteristics of waste handled, the location of all records within the facility, and the facility layout. In addition, this person must have the authority to commit the resources needed to carry out the contingency plan.

[401 KAR 39:090 Section 1, 40 CFR 264.55]

G.III.D.(6) Emergency Procedures

G.III.D.(6)(a) Activate Alarms

Whenever there is an imminent or actual emergency situation, the emergency coordinator (or his designee when the emergency coordinator is on call) shall immediately activate internal facility alarms or communication systems, where applicable, to notify all facility personnel, and notify appropriate state and local agencies as specified in the Contingency Plan.

[401 KAR 39:090 Section 1, 40 CFR 264.56(a)]

G.III.D.(6)(b) Notify Off-Post Emergency Responders

If the GB Sampling Emergency Coordinator and BGAD EOC determine that the facility has had a release, fire, or explosion which could threaten human health or the environment outside the GB Sampling Facility, findings shall be reported as follows:

- Immediately notify appropriate local authorities

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- Be available to help appropriate officials decide whether local areas should be evacuated
- Notify the Madison County Emergency Operations Center and Kentucky Emergency Management (KYEM).

[401 KAR 39:090 Section 1, 40 CFR 264.56(d)]

G.III.D.(6)(c) Release, Fire, or Explosion

The Emergency Coordinator and the BGAD EOC shall assess possible hazards to human health or the environment that may result from a release, fire, or explosion. This assessment shall consider both direct and indirect effects of the release, fire, or explosion (for example: the effects of any toxic, irritating, or asphyxiating gases that are generated, or the effects of any hazardous surface water run-off from water or firefighting chemicals used to control fire and heat-induced explosions).

[401 KAR 39:090 Section 1, 40 CFR 264.56(c)]

G.III.D.(6)(d) Affected Areas

The Emergency Coordinator shall ensure that, in the affected area of the facility:

- No waste that may be incompatible with the released material is treated, stored, or disposed of until cleanup procedures are completed
- All emergency equipment listed in the Contingency Plan is cleaned and fit for its intended use before operations are resumed

[401 KAR 39:090 Section 1, 40 CFR 264.56(h)]

G.III.D.(6)(e) Evaluate Release

Whenever there is a release, fire, or explosion, the Emergency Coordinator shall communicate the details of the emergency to the BGAD Emergency Operations Center (EOC), which shall immediately identify the character, exact source, amount, and areal extent of any released materials.

During the emergency, the Emergency Coordinator shall take all reasonable measures necessary to ensure that fires, explosions, and releases do not occur, recur, or spread. These measures shall include, where applicable, stopping processes and operations, collecting and containing released waste, and removing or isolating containers.

[401 KAR 39:090 Section 1, 40 CFR 264.56(e)]

G.III.D.(6)(f) Secure Recovered Waste

Immediately after an emergency, the Emergency Coordinator shall provide for treating, storing, or disposing of recovered waste; contaminated soil, surface, or ground water; or other material that may result from a release, fire, or explosion at the facility.

[401 KAR 39:090 Section 1, 40 CFR 264.56(g)]

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G.III.D.(6)(g) Environmental Emergency Written Report

The Permittee shall note in the Operating Record the time, date, and details of any incident that requires implementation of the Contingency Plan. Within fifteen (15) days after the incident, the Permittee shall submit a written report on the incident to the Hazardous Waste Branch Manager and the Division Field Office. The report shall include:

- Name, address, and telephone number of the Permittee
- Name, address, and telephone number of the facility
- Name, address, and telephone number of persons having actual knowledge of the facts surrounding the release or threatened release
- Date, time, and type of incident (for example, fire or explosion)
- Name, quantity, and concentration of materials, pollutant, or contaminant involved
- Precise location, circumstances, and cause
- The extent of injuries, if any
- An assessment of actual or potential hazards to human health or the environment, and daily efforts taken by the Permittee to control or mitigate, including monitoring data
- Estimated quantity and disposition of recovered material that resulted from the incident
- Changes in equipment, procedures, personnel, etc. to prevent similar incidents
- Any other pertinent or requested information

[401 KAR 39:090 Section 1, 40 CFR 264.56(i), KRS 224.1-400, KRS 224.46-530]

G.III.D.(6)(h) Daily Notification During Environmental Emergencies

The Permittee shall notify the Division Field Office and Hazardous Waste Branch daily by telephone, e-mail, or fax during an environmental emergency operation. The following information, at a minimum, shall be provided:

- A summary of the previous day's operations
- A summary of planned operations for the day, including monitoring and movement/handling
- Results of any monitoring since the last daily notification
- Any other pertinent or requested information

[401 KAR 39:060 Section 5, 40 CFR 270.32, KRS 224.46-530(1)(g)]

G.III.D.(6)(i) Memorandums of Agreement (MOA)

The Permittee shall keep current copies of all MOAs with off-post emergency responders at an on-site location. If, at any time, the Permittee enters into an agreement with an off-post emergency responder not listed in the Contingency Plan, Attachment G of the Application, or chooses not to renew an agreement with an off-post emergency responder listed in the Contingency Plan, then the Permittee shall notify the Hazardous Waste Branch Manager.

[401 KAR 39:090 Section 1, 40 CFR 264.52-53, 401 KAR 39:060 Section 5, 40 CFR 270.32]

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G.III.D.(6)(j) Monitoring During Halted Operations

If the facility stops operations in response to a fire, explosion, or release, the Emergency Coordinator shall ensure that monitoring occurs for leaks, pressure buildup, gas generation, or ruptures in the GB Sampling Facility.

[401 KAR 39:090 Section 1, 40 CFR 264.56(f)]

G.III.E. MANIFEST SYSTEM, RECORDKEEPING, AND REPORTING

G.III.E.(1) Manifest System

See Entire Facility Section

G.III.E.(2) Manifest Discrepancies

See Entire Facility Section

G.III.E.(3) Operating Record

The Permittee shall maintain at the GB Sampling Facility an operating record that describes the hazardous waste activities. The record shall include information as it becomes available, as listed in F.III.E.(3), as well as the following information:

- A log of all operating/processing hours, including the quantities of projectiles received, and for each projectile, the date(s) and times it was received, sampled, and transported away from the GB Sampling Facility
- Records associated with any off-site shipments of hazardous wastes generated at the facility, the types and locations of destination facilities, and how the wastes were managed at the destination facilities (for example: recycling, treatment, storage, or disposal)
- Records and results of waste analyses and waste determinations performed
- Records of all spills and all Ring-offs (three consecutive alarms from a Near Real Time (NRT) instrument)
- Summary reports and details of all incidents that require implementing the contingency plan
- Records and results of inspections
- Records of quantities and date of each shipment of hazardous waste placed in a land disposal unit pursuant to 401 KAR 39:090 Section 1
- The Permittee shall also ensure that the facility that receives, treats, and/or disposes of hazardous waste generated at the permitted facility has the appropriate permits to treat and/or dispose of the waste. The Permittee shall retain documentation of treatment from the treatment or disposal facility
- The Permittee shall retain on-site a copy of all notices, certifications, waste analysis data, and other documentation produced pursuant to this section for at least three years from the date that the waste that is the subject of such documentation was last sent to on-site or off-site treatment, storage, or disposal

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- A summary of any QA/QC reliability problems experienced with the Chemical Agent Filtration System (CAFS) or Near Real Time (NRT) instruments at the CAFS during operations. This summary shall include, but not be limited to:
 - Identification of the monitor or control device experiencing the problem
 - Identification of the type of problem
 - Date the problem was experienced
 - Frequency of the problem
 - Corrective action implemented to correct the problem, and whether or not or to what degree the corrective action was successful

[401 KAR 39:060 Sections 3 and 4, 40 CFR 261.1-3, 40 CFR 264.10-17, 401 KAR 39:090 Section 1, 40 CFR 264.56, 40 CFR 264.73, 40 CFR 264 Appendix I, 40 CFR 268.7, KRS 224.46-530(1)(g), KRS 224.50-130(5)]

G.III.E.(4) Records

See Entire Facility Section

G.III.E.(5) Annual Report

See Entire Facility Section

G.III.E.(6) Unmanifested Waste Report

See Entire Facility Section

G.III.E.(7) Additional Reports

(This condition is in addition to F.III.E.(7))

G.III.E.(7)(a) Immediate Notification

The Permittee shall report to the Division any non-compliance with the Permit which may endanger human health or the environment. Any information shall be provided orally within two (2) hours from the time the Permittee becomes aware of the circumstances (Kentucky twenty-four (24) hours reporting number, (800) 928-2380). This oral report shall include the following:

- Information concerning release of any hazardous waste or hazardous constituents that may cause an endangerment to public drinking water supplies, including both surface water and groundwater used for public drinking water supply
- Any information of a release or discharge of hazardous waste, or of a fire or explosion from the facility, that could threaten the environment or human health outside the facility

Non-compliance which requires immediate notification includes, but is not limited to:

- A determination by the Emergency Coordinator that there is an imminent or actual release, fire, or explosion which could threaten human health or the environment

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- Any Environmental Release, including but not limited to, those defined by Condition G.III.F.(3)
- An exposure of an unprotected worker to GB agent exceeding the Short-Term Exposure Limit (STEL) defined in Condition G.III.F.(2), whenever such exposure is confirmed by an Industrial Hygienist or other authorized personnel

[401 KAR 39:060 Section 6, 401 KAR 39:080 Section 5, KRS 224.1-400]

G.III.E.(7)(b) Follow-up Reporting

The Permittee shall provide the Division a written submission within five (5) days of the notification under Condition G.III.E.(7)(a).

The written submission shall contain:

- A description of the non-compliance and its cause, which shall include:
 - Name, address, and telephone number of the owner or operator and the reporter
 - Name, address, and telephone number of the facility
 - Date, time, and type of incident
 - Name and quantity of material(s) involved
 - The extent of injuries, if any
 - An assessment of actual or potential hazard to the environment and human health outside the facility, where this is applicable
 - Estimated quantity and disposition of recovered material that resulted from the incident
- The period of non-compliance, including exact dates and times
- Whether the non-compliance has been corrected
- If the non-compliance has not been corrected, the anticipated time it is expected to continue
- Steps planned or taken to reduce, eliminate, and prevent reoccurrence of the non-compliance

[401 KAR 39:060 Section 6, 401 KAR 39:080 Section 5, KRS 224.1-400]

G.III.F. MONITORING REQUIREMENTS

G.III.F.(1) Groundwater Monitoring Requirements

(RESERVED)

G.III.F.(2) Air Monitoring Requirements

- When N001 waste is present at the GB Sampling Facility, including periods of time when projectiles are being loaded or removed, the Permittee shall continuously monitor airborne concentrations of agent to prevent an exposure exceeding Airborne Exposure Limits, to determine the appropriate level of PPE for workers, and to ensure that the general population is not at risk due to airborne agent concentrations.
- The Permittee shall operate agent monitoring systems in accordance with the GB Sample Extraction Operation Permit Application, including the Site-Specific Air Monitoring Plan and Monitoring Location and Agent Category Table, Attachment N.
- The Permittee shall use a Near Real Time (NRT) alarm level of 0.7 VSL for monitoring at the final NRT monitoring locations prior to discharge to the environment.

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- Airborne and related exposure limits for GB agent are below.

Level	GPL _(a)	WPL _(b)	STEL _(c)	VSL _(d)	SEL/ASC _(e)
Averaging Time	12 hrs.	12 hrs.	15 min	Variable	N/A
Limit (mg/m ³)	6.7×10^{-7}	2×10^{-5}	1×10^{-4}	1×10^{-4}	N/A
Monitoring Method	Historic _(f)	Historic	NRT _(g)	NRT	N/A

- (a) GPL is the General Population Limit and is an airborne agent exposure limit for the general population
- (b) WPL is Worker Population Limit and is an airborne agent exposure limit for the worker population
- (c) STEL is Short Term Exposure Limit and is a concentration based on a 15-minute exposure for an unprotected worker, but is evaluated with an instrument using the shortest analytic cycle time practical to obtain accurate results. Since most NRT_(h) cycle times are less than 15min (typically 5-6min), confirmed readings and durations are used to calculate whether the STEL has been reached or exceeded.
- (d) VSL is Vapor Screening Level and is an agent vapor concentration-only value independent of time. As such, it is used to define a level of contamination for items, wastes, engineering controls systems (for example, filter beds and vestibules) and facilities under specific environmental conditions. VSL is the readout level of certain NRT monitors and the value is applied to process or operational monitoring as opposed to worker exposure.
- (e) SEL is Source Emission Limit and ASC is Allowable Stack Concentration. These are vapor agent concentration values that are independent of time and are measured with NRT instruments.
- (f) Historic monitoring is used when the sample analyzed represents an extended period of time and the results are not known until laboratory analysis is completed after the sampling event has been completed.
- (g) NRT is Near Real-Time monitoring and is conducted with instruments that have the capability to collect, analyze, and report or display results within 15 minutes. They also provide audible and remote alarms when levels are detected at, or above, a specific alarm set point.

[401 KAR 39:090 Section 1, 40 CFR 264.600-602]

G.III.F.(3) Environmental Releases

The Permittee shall operate the GB Sampling Facility to prevent an environmental release of hazardous waste or hazardous waste constituents. The Permittee shall report an environmental release in accordance with Condition G.III.E.(7).

An environmental release shall include the following:

- A confirmed GB agent detection equal to or greater than 0.7 VSL at the final NRT monitoring point of the glovebox Chemical Agent Filtration System (CAFS), or any Ring-off (i.e. three consecutive alarms from a NRT instrument) at this monitoring location for which DAAMS confirmation is unavailable
- A confirmed GB agent detection equal to or greater than 0.7 VSL at the final NRT monitoring point of the EE CAFS, or any Ring-off at this monitoring location for which DAAMS confirmation is unavailable
- Any spill or vapor release from an extracted sample of GB agent outside of engineering controls
- Otherwise releasing agent, outside of engineering controls, from the GB Sampling Facility or while transporting GB filled projectiles or samples during the GB Sampling operation

An "environmental release" that may threaten human health or the environment shall require activation of the Contingency Plan, Attachment G .

[401 KAR 39:060 Sections 5 and 6, 40 CFR 270.32, 401 KAR 39:090 Section 1, 40 CFR 264.31, 40 CFR 264.50-52, KRS 224.1-400(1)(b), KRS 224.1-400(4), KRS 224.50-130]

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G.III.F.(4) Inspection of Monitoring Equipment

When N001 waste is present at the GB Sampling Facility, the Permittee shall conduct daily inspections of monitoring equipment to ensure that the equipment is working properly. Inspections and maintenance shall ensure monitoring systems are meeting requirements of the Site-Specific Air Monitoring Plan. These inspection records shall be maintained as part of the facility Operating Record and made available for inspection by the Division.

[401 KAR 39:090 Section 1, 40 CFR 264.602]

G.III.G. CLOSURE & POST-CLOSURE

See Entire Facility Section

G.III.H. FINANCIAL REQUIREMENTS

Not Applicable

G.III.I. USE AND MANAGEMENT OF CONTAINERS

G.III.I.(1) Condition of Containers

If a container holding (non-munition) hazardous waste is not in good condition, including but not limited to severe rusting or apparent structural defects, or if it begins to leak, the Permittee shall transfer the hazardous waste from this container to a container that is in good condition.

[401 KAR 39:090 Section 1, 40 CFR 264.171]

G.III.I.(2) Compatibility of Waste with Containers

The Permittee shall use containers made of, or lined with, materials which do not react with, and are otherwise compatible with, the hazardous waste to be stored so that the ability of the container to contain the waste is not impaired.

[401 KAR 39:090 Section 1, 40 CFR 264.172]

G.III.I.(3) Management of Containers

G.III.I.(3)(a) Container Storage Area

Any container storage area within the GB Sampling Facility shall be maintained and operated in accordance with 401 KAR 39:080, Section 1, and to allow compliance with the inspection and container management requirements described in Procedures to Prevent Hazards, Attachment F.

[401 KAR 39:080 Section 1, 40 CFR 264.34(a)-(i), 401 KAR 39:090 Section 1, 40 CFR 264.30-35, 40 CFR 264.37, 40 CFR 264.170-179]

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G.III.I.(3)(b) Container Total Volume

Not Applicable

G.III.I.(3)(c) Permitted Container Storage Unit and Volume

Not Applicable

G.III.I.(3)(d) Container Waste Restriction

The Permittee shall provide secondary containment for any hazardous waste container that contains free liquids while in a less than 90 day accumulation area.

[401 KAR 39:090 Section 1, 40 CFR 264.601, KRS 224.46-530(1)(g), KRS 224.50-130]

G.III.I.(3)(e) Performance Oriented Packaging (POP)

The Permittee shall maintain non-munition, hazardous waste only in containers that meet Department of Transportation (DOT) Performance Oriented Packaging (POP) standards. Any waste transported off-site shall be packaged according to POP standards.

[401 KAR 39:080 Section 1, 40 CFR 262.30]

G.III.I.(3)(f) Storage of Non-Hazardous Materials

Not Applicable

G.III.I.(3)(g) Container Closed

A container holding any hazardous waste shall always be closed during storage except when it is necessary to add or remove waste.

[401 KAR 39:090 Section 1, 40 CFR 264.173]

G.III.I.(3)(h) Container Handling

A container holding hazardous waste shall not be opened, handled, or stored in a manner which may rupture the container or cause it to leak. GB filled projectiles that are located anywhere within the GB Sampling Facility shall be moved only in emergencies or as identified in Process Information, Attachment D.

[401 KAR 39:090 Section 1, 40 CFR 264.173, KRS 224.50-130(5)]

G.III.I.(3)(i) Container Labeling

- Non-munition containers shall be labeled in accordance with applicable regulations.
- Containers holding extracted samples of GB agent shall be labeled in accordance with applicable regulations for samples.

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- Overpacks in which hazardous waste are placed shall be labeled "Hazardous Waste" and labeled with the date that hazardous waste is added. Additional labeling shall clearly identify the content of the overpack. Hazardous waste containers shall be positioned so that labels are visible and easy to inspect.

[401 KAR 39:080 Section 1, 40 CFR 262.31, 40 CFR 262.34(a)-(i), KRS 224.46-530(1)(g)]

G.III.I.(3)(j) Maximum Free Liquid

Not Applicable

G.III.I.(4) Container Inspections

- Permittee shall conduct weekly inspections for leaking containers and deterioration of containers caused by corrosion or other factors.
- During GB Sampling operations, the Permittee shall conduct daily inspections for deterioration of the EE and PDS.
- Inspections shall be conducted in accordance with Procedures to Prevent Hazards, Attachment F.

[401 KAR 39:090 Section 1, 40 CFR 264.174]

G.III.I.(5) Containment System

Not Applicable

G.III.I.(6) Special Requirements for Ignitable or Reactive Waste

Containers holding ignitable or reactive waste shall be located at least fifteen meters from the facility's property line.

[401 KAR 39:090 Section 1, 40 CFR 264.176]

G.III.I.(7) Special Requirements for Incompatible Wastes

Incompatible wastes, or incompatible wastes and materials, shall not be placed in the same container. Hazardous waste shall not be placed in an unwashed container that previously held an incompatible waste or material. A storage container holding a hazardous waste that is incompatible with any waste or materials stored nearby in other containers, shall be separated from the incompatible materials, or protected from them by means of a dike, berm, wall, or engineering controls.

[401 KAR 39:090 Section 1, 40 CFR 264.177]

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G.III.I.(8) Removal at Closure

At closure, the Permittee shall remove all hazardous waste and hazardous waste residues from the containment system and remaining containers, liners, bases, and soil containing or contaminated with hazardous waste or hazardous waste residues shall be decontaminated or removed from the facility in accordance with the Closure Plan, Attachment I.

[401 KAR 39:090 Section 1, 40 CFR 264.178]

G.III.J. TANK SYSTEMS	(RESERVED)
G.III.K. SURFACE IMPOUNDMENTS	(RESERVED)
G.III.L. WASTE PILES	(RESERVED)
G.III.M. LAND TREATMENT	(RESERVED)
G.III.N. LANDFILLS POST CLOSURE REQUIREMENTS	(RESERVED)
G.III.O. INCINERATORS/BIF	(RESERVED)
G.III.P.	(RESERVED)
G.III.Q.	(RESERVED)
G.III.R.	(RESERVED)
G.III.S. SPECIAL PROVISIONS FOR CLEANUP	(RESERVED)
G.III.T.	(RESERVED)
G.III.U.	(RESERVED)
G.III.V.	(RESERVED)
G.III.W. DRIP PADS	(RESERVED)

G.III.XA. MISCELLANEOUS UNIT "A": GB SAMPLING OPERATIONS

G.III.XA.(1) General Requirements

- The Permittee shall construct, operate, maintain, and inspect the GB Sampling Facility as specified in Process Information, Attachment D, and Procedures to Prevent Hazards, Attachment F.
- No more than six GB filled projectiles shall be sampled during GB Sampling operations.

[401 KAR 39:090 Section 1, 40 CFR 264.600-602]

G.III.XA.(2) Vapor Containment Requirements

- The EE shall provide vapor containment to prevent the release of agent to the environment.
- When N001 waste is present in the EE or PDS, a carbon filtration unit with multiple carbon banks shall be provided in continuous operation to maintain the interior of the EE and PDS at a negative pressure and prevent the release of the GB agent vapors to the environment.
- Extracted samples of GB agent shall be contained in a manner that prevents vapor releases to the environment.

[401 KAR 39:090 Section 1, 40 CFR 264.600-602]

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G.III.XA.(3) Operating Requirements

G.III.XA.(3)(a) Hours of Operation

Not Applicable

G.III.XA.(3)(b) Waste Feed Limits

Not Applicable

G.III.XA.(3)(c) Operating Conditions

- Sampling of GB filled projectiles shall occur in accordance with the Permit Application.
- No more than one GB filled projectile shall be present in the glovebox at one time.
- Except in emergencies, once a GB filled projectile has been unloaded in the GB Sampling Facility, sampling operations shall continue until the projectile has been placed in an overpack.
- GB filled projectiles shall not be removed from the EE except in an overpack and during daylight hours.
- No more than four GB filled projectiles shall be present in the GB Sampling Facility at one time.
- A GB agent sample that has been extracted from a projectile shall be carried only in a container that is closed and monitored to the Worker Population Limit (WPL) before the sample is removed from the EE.

[401 KAR 39:090 Section 1, 40 CFR 264.31, 40 CFR 264.600-602, KRS 224.46-530(1)(g)]

G.III.XA.(3)(d) Performance Standards

- Agent emissions shall comply with the requirements in Condition G.III.F.(3), Environmental Releases.
- Flooring of the EE and PDS shall be free of cracks and gaps and be sufficiently impervious to contain leaks and spills until the collected material is removed.
- The operation of the GB Sampling Facility shall continuously ensure protection of human health and the environment.

[401 KAR 39:090 Section 1, 40 CFR 264.601]

G.III.XA.(4) Systemization

Not Applicable

G.III.XA.(5) Test Plan

Not Applicable

G.III.XA.(6) Agent Operations Ramp-up Period

Not Applicable

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G.III.XA.(7) Demonstration Test Plan

Not Applicable

G.III.XA.(8) Demonstration Test Data Submittal

Not Applicable

G.III.XA.(9) Inspections

- Inspections of the GB Sampling Facility shall be conducted in accordance with Procedures to Prevent Hazards, Attachment F.
- Equipment or structure deterioration or malfunction identified during inspection shall be promptly remedied to ensure the non-compliance does not cause an environmental or human health hazard.

[401 KAR 39:090 Section 1, 40 CFR 264.15, 40 CFR 264.602]

G.III.XA.(10) Maintenance

Not Applicable

G.III.XB. MISCELLANEOUS UNIT "B": MOVEMENT AS TREATMENT

G.III.XB.(1) Definition

The Commonwealth of Kentucky has promulgated a revised environmental statute, which states the following: "In addition to the definition of the term as defined in this chapter, the term "treatment", as used in this section, shall include the manual or mechanical handling of the chemical compounds listed in subsection (2) of this section and of any munitions containing the compounds during the processing of munitions to remove the compounds, to separate munitions components, and to otherwise prepare the components and compounds for destruction, neutralization, dismantling, or decommissioning. The term "treatment" shall not include the handling, movement, or overpacking of containers or munitions containing a compound listed in subsection (2) of this section within the fenced boundaries of an area used for the storage of those munitions if:

*A plan for the handling, movement, or overpacking is submitted and approved by the cabinet, after public notice and opportunity to be heard, before the handling, movement, or overpacking occurs; or
An emergency has occurred and the handling, movement, or overpacking is necessary to protect human health, safety, or the environment, if a report describing the handling, movement, or overpacking is submitted to the cabinet as soon as possible after the emergency is abated."*

Based upon the Kentucky Revised Statutes, transportation of GB filled items (i.e., projectiles, overpacks, and sample containers) is regulated as treatment under existing Commonwealth of Kentucky environmental regulations [KRS 224.50-130(5)] and shall comply with applicable Kentucky and Federal hazardous waste treatment regulations.

[KRS 224.50-130(5)]

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G.III.XB.(2) General Requirements

- GB filled projectiles and extracted samples of GB agent shall be handled and transported in a manner that prevents releases of GB agent to the environment.
- The Permittee shall ship the extracted samples of GB agent in accordance with the Department of Transportation (DOT) requirements for packaging.
- No more than six GB filled projectiles shall be transported to the Environmental Enclosure (EE) during the entirety of GB Sampling operations.

[KRS 224.50-130(5)]

G.III.XB.(3) Operating Requirements

G.III.XB.(3)(a) Hours of Operation

Movement of GB filled projectiles, including loading and unloading of projectiles at the EE, shall occur only during daylight hours.

G.III.XB.(3)(b) Waste Feed Limits

Not Applicable

G.III.XB.(3)(c) Operating Conditions

- Movement of GB filled projectiles, including transportation to and from the GB Sampling Facility and loading and unloading of projectiles at the EE, shall be conducted in accordance with Process Information, Attachment D.
- Each GB filled projectile shall be contained in a single round container (SRC) when it is not within either a Hazardous Waste Storage Unit (HSWU or "igloo") or the EE.
- A projectile that is being transported shall be secured to a pallet, and pallets shall be secured to the transport vehicle, as specified in the Permit Application.
- After extraction, samples of GB agent shall be handled in accordance with Process Information, Attachment D.
- The Permittee shall ship extracted samples of GB agent in accordance with Process Information, Attachment D.

[401 KAR 39:060 Section 3, 40 CFR 261.4, 401 KAR 39:090 Section 1, 40 CFR 264.31, 40 CFR 264.600-602, KRS 224.46-530(1)(g)]

G.III.Y.

(RESERVED)

G.III.Z.

(RESERVED)

G.III.AA. AIR EMISSION STANDARDS FOR PROCESS VENTS

See Entire Facility Section

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G.III.BB. AIR EMISSION STANDARDS FOR EQUIPMENT LEAKS

See Entire Facility Section

G.III.CC. AIR EMISSION STANDARDS FOR TANKS, SURFACE IMPOUNDMENTS AND CONTAINERS

See Entire Facility Section

G.III.DD. CONTAINMENT BUILDINGS

(RESERVED)

G.III.EE. HAZARDOUS WASTE MUNITIONS AND EXPLOSIVES STORAGE

(RESERVED)

PART IV CORRECTIVE ACTION FOR SWMUS AND AOCS

See Entire Facility Section

PART V REFERENCED ATTACHMENTS

G.V.A. Attachment A, Part A (GB Sampling Operations)

Part A of the Permit Application is incorporated as Attachment A of this permit.

[KRS 224.46.530]

G.V.B. Attachment B, Facility Description (GB Sampling Operations)

Part B of the Permit Application, Facility Description, is incorporated as Attachment B of this permit.

[KRS 224.46-530]

G.V.C. Attachment C, Waste Analysis Plan (GB Sampling Operations)

Part C of the Permit Application, Waste Analysis Plan, is incorporated as Attachment C of this permit.

[KRS 224.46-530]

G.V.D. Attachment D, Process Information (GB Sampling Operations)

Part D of the Permit Application, Process Information, is incorporated as Attachment D of this permit.

[KRS 224.46-530]

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(RESERVED)

G.V.E. Referenced Attachments

G.V.F. Attachment F, Procedures to Prevent Hazards (GB Sampling Operations)

Part F of the Permit Application, Procedure to Prevent Hazards, is incorporated as Attachment F of this permit.

[KRS 224.46-530]

G.V.G. Attachment G, Contingency Plan (GB Sampling Operations)

Part G of the Permit Application, Facility Contingency Plan, is incorporated as Attachment G of this permit.

[KRS 224.46-530]

G.V.H. Attachment H, Personnel Training (GB Sampling Operations)

Part H of the Permit Application, Facility Personnel Training, is incorporated as Attachment H of this permit.

[KRS 224.46-530]

G.V.I. Attachment I, Closure Plans, Post Closure Plans, and Financial Requirements (GB Sampling Operations)

Part I of the Permit Application, Closure Plans, Post Closure Plans, and Financial Requirements, is incorporated as Attachment I of this permit.

[KRS 224.46-530]

G.V.J. Attachment J, Other Federal Laws (GB Sampling Operations)

Part J of the Permit Application, Other Federal Laws, is incorporated as Attachment J of this permit.

[KRS 224.46-530]

G.V.K. Attachment K, Waste Minimization (GB Sampling Operations)

Part K of the Permit Application, Facility Waste Minimization Program, is incorporated as Attachment K of this permit.

[KRS 224.46-530]

G.V.L. Attachment L, Signatures (GB Sampling Operations)

Part L of the Permit Application, Permittee Signatures, is incorporated as Attachment L of this permit.

[KRS 224.46-530]

G.V.M. Attachment M, Multi-Pathway Human Health Risk Assessment (MPHHRA)

(RESERVED)

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G.V.N. Attachment N, GB Sampling Facility Monitoring Locations

Monitoring Location	NRT Location No.	Location Description	MINICAMS Unit Present?	Function of DAAMS Unit	Reason for Monitoring	Compliance Point?
1	1	Glove box	Yes	NRT Confirmation	Workspace monitoring	No
2	2	Unpack Area/Sample Table	Yes	NRT Confirmation	Workspace monitoring, Headspace monitoring	No
3	3-1 3-2 3-3 3-12	Filter 1, Midbed 1 Filter 1, Midbed 2 Filter 1, Midbed 3 Filter 1, Exhaust	Yes	NRT Confirmation	Verify midbed integrity, Environmental protection	Yes (At final monitoring point)
4	4-1 4-2 4-3 4-12	Filter 2, Midbed 1 Filter 2, Midbed 2 Filter 2, Midbed 3 Filter 2, Exhaust	Yes	NRT Confirmation	Verify midbed integrity, Environmental protection	Yes (At final monitoring point)
5	5	PDS	Yes	NRT Confirmation (Available)	Monitoring for potentially exposed workers and chemical casualties	No
6	N/A	Historical workspace at CAFS inlet	No	Historical Monitoring	Historical monitoring of the EE	No

[GB Sample Extraction Operation Permit Application, Attachment D-2]

PART VI WASTE MINIMIZATION

See Entire Facility Section